
Preface

Approach—Organization of the Book

Icelandic soils are quite different in nature from the soils found on either side of the Atlantic, because of the active volcanism, unique climate conditions, and especially active geomorphic processes shaping the island. This book on *The Soils of Iceland* takes a broad approach considering soils as a part of ecosystems. The book provides the fundamental background to Icelandic nature, including climate (Chap. 2) and the volcanic geology (Chap. 3), which is the single most important factor in determining soil formation on this island: the formation of Andosols and Vitrisols. The book also provides some basic information about the people and the use of the land (Chap. 2). Vegetation of the country is described in Chap. 4, based on a comprehensive land cover database housed at the Agricultural University of Iceland. The author also found it necessary to present a short review on Andosols (Chap. 5), which Icelandic soils basically are, with the often peculiar properties that characterize Andosols.

The more traditional soil science sectors are described in four Chaps. (6–9) on classification, physical properties, chemistry, and finally genesis and biological issues. Chapter 7 on physical properties suffers from lack of such studies in Iceland, but more is known about the basic chemistry and genesis. Information about land use is woven into these chapters, which include numerous photographs, tabular information, and figures representing various relationships between soil properties.

Iceland is a cold land with climate characterized by winter temperatures oscillating around zero. The soils are very frost susceptible leading to some of the most frost affected soils and nature anywhere outside of permafrost regions, which merits a special chapter (Chap. 10) on soil frost and its effect on Icelandic landscapes. Chapter 11 is devoted to the extensive aeolian environments, which influence all other ecosystems through redistribution of volcanic materials.

With land degradation as the major factor shaping Icelandic ecosystems, considerable effort is devoted to the history and processes of degradation in Chap. 12. And the question how is such knowledge achieved? Understanding soils is part of the literacy needed to read the land, to understand the state of the land, function, and condition; an approach taken in Chap. 12.

Punctuation—Icelandic

This book includes the names of many Icelanders, Icelandic place-names, and other words which involve the use of special characters when written in Icelandic such as á/Á, é/É, í/Í, ú/Ú, ý/Ý, and ö/Ö, which can be found in various other European languages. The characters also include ð/Ð, þ/Þ, and æ/Æ. All these characters can give problems in English publications, during printing and also with cross-referencing author names in modern-day reference databases. The author has

selected to avoid the use of special Icelandic characters and hyphens in the names of authors or people except for the letter ð. Many other Icelandic authors have selected this approach, but the names can otherwise be found spelled in two or more different manners in databases. Thus, Ólafur Arnalds becomes Olafur Arnalds in this book. Þ is spelled Th in the reference lists, ð as d and æ as ae. However, Icelandic place names and journal names are spelled out in Icelandic.

The Soils of Iceland

Arnalds, O.

2015, XVII, 183 p. 186 illus., 169 illus. in color.,

Hardcover

ISBN: 978-94-017-9620-0